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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/735,706 | 12/16/2003 | Karl Schreiber | 2560-0415 | 3451 |

7590 09/06/2005

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EXAMINER

HEINRICH, SAMUEL M

ART UNIT PAPER NUMBER

1725

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/735,706

Applicant(s)

SCHREIBER ET AL.

Examiner

Samuel M. Heinrich

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/04; 11/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 6,223,976 to Clement et al. See Summary of the Prior Art (column 1) for a description of beam welding of intermetallic materials which, although stated as being unsuitable, is a process which has been known in the art. Laser welding is well known for its very low heat input into the work components.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,223,976 to Clement et al in view of Applicant's Admitted Prior Art (AAPA). Clement discloses the known process of laser joining, with or without filler material, of titanium aluminides. AAPA comprises descriptions in the specification, such as Background of the Invention, and comprises the Information Disclosure Statements which comprise documents pertaining to a variety of known joining processes for materials such as titanium aluminide. The use of a laser joining process for joining titanium aluminide with a filler would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because the laser joining has well known properties such as having a small heat affected zone. Applicant has recited numerous dependent limitations which read like a book description of joining processes. There are numerous well known books and handbooks, such as the Metals Handbook, which describe all of the well known joining process limitations set forth in the instant dependent claims. The use of well known joining process limitations such as workpiece shape as a sheet, braze gaps, butt joints, protective gas, temperature and pressure, braze construction, and backing bars would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because the teachings are readily available to all students of joining.

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP61095769 in view of EP0904881A1 and in view of Applicant's Admitted Prior Art

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(AAPA). JP61095769 describes laser brazing of a turbine blade. EP0904881A1 describes diffusion brazing methods for titanium aluminide parts. AAPA describes well known titanium aluminide turbine blades. The use of the laser brazing of well known parts made of well known titanium aluminide would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because the laser is well known to provide a low heat affected zone and therefor maintains workpiece material properties. Applicant has recited numerous dependent limitations which read like a book description of joining processes. There are numerous well known books and handbooks, such as the Metals Handbook, which describe all of the well known joining process limitations set forth in the instant dependent claims. The use of well known joining process limitations such as workpiece shape as a sheet, braze gaps, butt joints, protective gas, temperature and pressure, braze construction, and backing bars would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because the teachings are readily available to all students of joining.

Conclusion

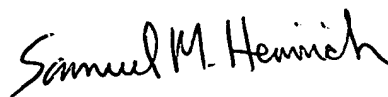
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art pertains to descriptions of joining with the use of either of laser joining and furnace joining.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel M. Heinrich whose telephone number is 571-272-1175. The examiner can normally be reached on M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Dunn can be reached on 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Samuel M Heinrich
Primary Examiner
Art Unit 1725

SMH